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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,490	07/09/2001	Hidetada Fukushima	010866	4191

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EXAMINER
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SALAD, ABDULLAHI ELMI

ART UNIT	PAPER NUMBER
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2157

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/900,490

Applicant(s)

FUKUSHIMA ET AL.

Examiner

Salad E Abdullahi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 and 13-16 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 and 17-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/12/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This application has been reviewed. Original claims 1-29 are pending. The rejection cited stated below

#### ***Allowable Subject Matter***

2. Claims 8-10, 11 and 13-16 are allowed.
3. The following is an examiner's statement of reasons for allowance: the prior art of record fail to teach or suggest a management system of a machine, comprises: a maintenance rank table organized by model that stores a maintenance prediction value with respect to a maintenance within a contract term or a contract time for two or more contract ranks every each model, a means for storing a maintenance actual result value, where the maintenance actual result value of the machine, which is entered using the input means and accumulatively stored, and a determination means that determines whether a maintenance actual result value is larger than a maintenance prediction value, where the maintenance prediction value that corresponds to the machine's mode and the contract rank is read out of the maintenance rank table organized by model after a expiration of the contract of the machine, while the maintenance result value of the machine is read out of the storage means that stores the maintenance actual result value.
4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-7, and 12 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poisner U.S. Patent No. 6,842,776 in view of Bjornson U.S. Patent No. 6,728,660.

As per claims 1, 17 and 18, Poisner discloses a management system of a machine equipped with a driving power source, comprises:

a maintenance management information storage means that stores information about conditions of maintenance on the basis of both usage conditions and operating conditions for each model of the machine (see col. 3, lines 60-65);

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an input means for entering data of the machine's model, the usage conditions, and the operating conditions into the storage means (see col. 3, lines 50-59); and

a control means (i.e., processor) , wherein on the condition that the machine's model, the usage conditions and the operating conditions of the machine have been entered in the storage means through the input means, the control means reads out conditions for maintenance that correspond to the machine's model (i.e., device identifier)<sup>3</sup>, the usage conditions, and the operating conditions, respectively, from the storage means to predict information about a recommendation for maintenance management at a predetermined operation time of the machine with reference to the conditions of maintenance(see col. 3, lines 66 to col. 4, lines 24).

Poisner does not explicitly disclose a display means.

Bjornson discloses a management and monitoring system for equipment including a display means for displaying maintenance recommendation to user (see figs 13a-13g).

Therefore, it would have been obvious to one having ordinary skill in the art at the of the invention to incorporate the teaching of Bjornson such as the display means into the system of Poisner such that the maintenance recommendation can be displayed to the user to ensure that proper and accurate data are obtained and provided to the user.

As per claim 2, Poisner discloses a management system of a machine as claimed in claim 1, further comprising: a state-measuring means to measure the state of the machine and to produce information about the results of measurement, wherein the control means optimizes the information about a recommendation for maintenance

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management with reference to the information about the results of measurement from the state-measuring means (see col. 1, line 65 to col. 2, line 10).

As per claim 3, Poisner discloses a management system of a machine as claimed in claim 2, wherein the control means includes a different part determination means that estimates the unusual part of the machine on the basis of the information about the results of the above measurement provided from the state-measuring means and determines whether there is a need of replacing the part with new one (see col. 4, lines 25-41).

As per claim 4, Poisner discloses a management system of a machine as claimed in claim 2, wherein the control means includes a means for reconsidering a part-replacing condition among the conditions for maintenance, which are stored in the storage means for storing the maintenance management information with reference to the predicted maintenance management recommendation information and the maintenance conditions stored in the maintenance management information storage means (see col. 4, lines 25-41).

As per claim 5, the claim includes features discussed above with respect to claim 1, further reciting the management system of a machine equipped with a driving power source, comprises: a client terminal (i.e., device 206) and a server (central computer

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204)connected to the client terminal through a network (220)(see fig. 2 and col. 2, lines 63 to col. 3, line 30).

As per claim 6, Poisner discloses a management system of a machine as claimed in claim 5, wherein the server distributes the predicted maintenance management recommendation information to the client terminal connected to the server through the network (see col. 4, lines 25-41).

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Poisner as applied to claim 1 above, and further in view of Bjornson U.S. Patent No. 6,728,660. As per claim 7, Poisner discloses substantial features of the claimed invention as discussed above with respect to claim 6, including a management system of a machine as discussed in claim 6, wherein the server executes the predicted maintenance management recommendation information under some conditions.

Poisner is silent regarding: the server includes a means for representing the contents of cost estimation on the display means with respect to each of these conditions.

Bjornson discloses an equipment maintenance computer system including a means for representing the contents of cost estimation on the display means with respect to each of these conditions (i.e., predicting life cycle costs associated with a piece of equipment) (see fig. 6, col. 7, lines 29-50, and col. 13, lines 14-27). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to

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incorporate the teaching of Bjornson into the system of Poisner to allow recommended maintenance or repairs to be scheduled more intelligently and cost effectively.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salad E Abdullahi whose telephone number is 571-272-4009. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Abdullahi Salad

2/18/2005